

Remarks

Claims 1-13 are currently pending. Claims 1, 8 and 13 have been amended. Claims 1 and 13 have been amended to include the feature that the intermediate branch has a free end, the retaining member being adapted to close off the second end of the chamber to fluid flow from the intermediate branch. Basis for this amendment can be found in Figures 1 and 2 of the application as filed which shows the plate 4 located in the second end of the chamber preventing fluid flow from the intermediate branch from reaching the second end of the chamber. No new matter has been presented. Entry of the amendments is respectfully requested.

Rejections Under 35 USC 112(2)

Claim 8 has been amended to replace the word “comprising” with “consisting of,” in accordance with the Examiner’s suggestion. Accordingly, it is submitted that the rejection has been overcome and should be withdrawn.

Rejections Under 35 USC 103(a)

The Examiner rejected claims 1-5 and 13 as obvious over Perry (US 5,919,284) in view of Williamson (US 5,480,547), on the ground that Perry has a support screen 63 which could be regarded as a retaining member to which the coalescer elements are attached, and that the intermediate branch of Perry is located between this retaining member 63 and the first end (13) of the chamber.

Claims 1 and 13 have been amended to more clearly define the position of the retaining member in closing off the second end of the chamber to fluid flow from the intermediate branch. In other words, fluid flow from the intermediate branch does not flow past the retaining means, which prevents the fluid flow from reaching the second end of the chamber. This is not suggested by Perry, where support screen 63 of Perry is mounted in the chamber but does not close off fluid flow from the intermediate branch 21. Fluid is permitted to flow from the intermediate branch to both sides of the screen 63.

Williamson's device separates the chamber into two parts by a tube sheet 28. Fluid flow into the chamber from the intermediate branch 22 passes the retaining member before entering into and through the coalescing element 30 in a coaxial direction.

Both Perry's and Williamson's devices have the disadvantage that the fluid entering the coalescer necessarily passes the retaining member, which causes an undesirable pressure drop. This is because the intermediate branch is not located between the retaining member and the first end of the chamber and the retaining member does not close off the second end of the chamber to fluid flow from the intermediate branch.

In contrast, in the present invention closing off the second end of the chamber to fluid flow from the intermediate branch, thereby ensuring that fluid flow does not pass the retaining member, avoids this pressure drop. Attention is drawn to the specification as filed, which describes how tests have shown that pressure drops across the coalescer of less than one bar may be achieved (page 10, lines 7 to 9). The pressure drop will depend to a large extent on the flow characteristics of the fluid and the present specification describes how the size and dimensional shape of the coalescer will be dependent on these flow characteristics which includes the desired or allowable system pressure drop (page 7, lines 31 to 36).

There is no disclosure in Williamson of closing off the second end of the chamber to fluid flow from the intermediate branch and no teaching that would suggest to the skilled person to alter the device of Perry to relocate the screen 63 to close off the second end of the chamber to fluid flow. In both Perry and Williamson, fluid is directed to flow past the retaining member thereby leading to the pressure drops discussed above. Therefore, the invention of the amended claims is inventive over Perry in view of Williamson.

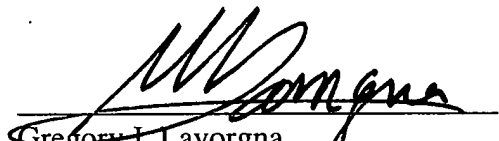
The Examiner rejected claims 6-8 as obvious over Perry in view of Williamson and Hughes (US 4,640,781). Because claim 1 is deemed allowable, these claims, which depend from an allowable claim, are therefore also considered allowable.

The Examiner rejected claim 9 as obvious over Perry in view of Williamson, Hughes, and Boogay (US 4,299,699). Because claim 1 is deemed allowable, this claim, which depends from an allowable claim, is therefore also considered allowable.

It is respectfully submitted that all pending claims, as amended, are in condition for allowance, and Applicant respectfully requests that allowance be granted at the earliest date possible. Should the Examiner have any questions or comments regarding Applicant's amendments or response, the Examiner is asked to contact Applicant's undersigned representative at (215) 988.2700.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0573.

Respectfully submitted,



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